

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. **(Currently Amended):** A method of validating a flight plan constraint, at an imposed waypoint, for a flight computer, comprising the steps of:

delivering flight presets to an aerodyne during a resumption of automatic following of a flight plan after a piloted flight phase,

making a forecast of the displacement of the aerodyne up to ~~[[an]] the~~ imposed waypoint for a validation of said constraint by ~~[[the]] an~~ FMS flight computer, taking account of the transition between the instances of application by the aerodyne of the flight presets prevailing before the resumption of the automatic following of the flight plan and those newly provided by the flight computer during this same resumption, and validating said constraint in the case where it would not be complied with by the aerodyne if it reached ~~[[an]] the~~ imposed waypoint by following said forecast of displacement, doing so in order that it remains taken into account in ~~[[the]]~~ subsequent automatic following of the flight plan.

2. (Previously Presented): The method as claimed in claim 1, wherein the forecast of displacement of the aerodyne up to the imposed waypoint, taking account of the transition between the instances of application by the aerodyne of the flight presets prevailing before the resumption of the automatic following of the flight plan and those newly provided by the flight computer during the same resumption is made according to a first order variation model.

3. (Previously Presented): The method as claimed in claim 1, applied to the validation of an altitude constraint, wherein the forecast of displacement of the aerodyne

up to the imposed waypoint taking account of the transition between the instances of application by the aerodyne of the flight presets prevailing before the resumption of the automatic following of the flight plan and those newly provided by the flight computer during the same resumption is limited to a vertical trajectory forecast.

4. (Previously Presented): The method as claimed in claim 3, wherein the vertical trajectory forecast is made by assuming that the aerodyne has, during the vertical speed transition between its initial value  $Vz_0$  before the automatic following of the flight plan by the computer (30) and its final value  $Vz_f$  imposed by the flight computer, a constant ground speed and a vertical speed  $Vz$  according to a first order variation model complying with the relation:

$$Vz = (Vz_0 - Vz_f) e^{\left(\frac{-t}{\tau}\right)} + Vz_f$$

$t$  being the time variable and  $\tau$  a constant characteristic of the aerodyne steered by its automatic pilot or its flight director, according to a law of acquisition of a vertical speed preset  $Vz_f$ .

5. (Previously Presented): The method as claimed in claim 3, comprising:

- estimating the date  $t_{seq}$  of passage of the aerodyne at the constrained waypoint on the basis of the distance  $\Delta dist_0$  between the position of the aerodyne upon the instigation of the automatic following of the flight plan and the position of the constrained waypoint by assuming that the aerodyne has a constant ground speed  $GrdSpd$  and by applying the relation:

$$t_{seq} = \frac{\Delta dist_0}{GrdSpd}$$

- estimating the difference in altitude  $\Delta z_{seq}$  of the aerodyne between the predicted altitude at the constrained waypoint and the value of the altitude constraint, by

assuming that the vertical speed of the aerodyne changes, from its initial value  $Vz_0$  before the automatic following of the flight plan by the flight computer to its final value  $Vz_f$  corresponding to the flight plan and imposed by the computer, by following a first order variation model complying with the relation:

$$\Delta z_{seq} = -\tau(Vz_0 - Vz_f) \left( 1 - e^{\left( \frac{-t_{seq}}{\tau} \right)} \right) + Vz_f t_{seq}$$

$\tau$  being a constant characteristic of the aerodyne steered by its automatic pilot or its flight director, according to a law of acquisition of a vertical speed preset  $Vz_f$ , and

- validating the taking into account of the altitude constraint in the case of compliance with the inequality:

$$|\Delta z_{seq}| > |\Delta z_0| - \Delta z_{margin}$$

$\Delta z_{margin}$  being a safety altitude margin.

6. (Previously Presented): The method as claimed in claim 4, wherein the initial value  $Vz_0$  of the speed of descent of the aerodyne at the moment of the resumption of the automatic following of the flight plan by the flight computer, taken into consideration by the validation system, is measured, at the moment of the instigation of the automatic following of the flight plan, by vertical speed sensors equipping the aerodyne.

7. (Previously Presented): The method of claim 1, wherein the flight computer is a Flight Management System (FMS) computer.